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03/20/03 12:12 PM

To: Nabil Fayoumi cc: "Johnson, Ike/MKE", "Li, Ning/STL"
Subject: Review of Solutia Response-to-comments on RD/RA Prefinal Design Submittal.

Nabil - please find attached a draft technical memorandum that documents our review of Solutia's March 6, 2003 letter containing their response to EPA comments on the RD/RA Prefinal Design Submittal. We would be happy to revise the memorandum based upon your feedback.

Please note that we are still reviewing the information provided by Solutia in Attachment A (Proposed Hydraulic Testing and Modeling...) and Attachment B (Proposed Approach for Establishing Performance Monitoring Action Levels...) and will provide comments on this material in the near future.

Regards - Peter RDRA-TECHNICAL MEMORAN

Review of Solutia's Responses to EPA Comments on RD/RA Prefinal Design - GMCS (March 6, 2003)

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DATE: March 20, 2003

CH2MHILL has reviewed Solutia's March 6 letter which contains their responses to comments made by EPA in their February 20, 2003 letter on the RD/RA Prefinal Design submittal. While we agree in general with the Reponses provided, several issues remain that require further clarification and further technical information.

In particular, we are concerned with the statement (provided in Response # 2) that "*Much of the detail of the actual barrier wall design cannot be developed until after the selection of a specific contractor...and the outcome of the pre-construction test program*". It should be noted that the RD/RA SOW (p. 8, Task 2) requires that the results of treatability studies and additional field sampling be included in the Prefinal Design submittal. In other words, this information should be available to EPA reviewers as part of the Prefinal Design submittal.

To help address these design omissions, it is recommended that a detailed Test Cell Construction Report be provided shortly after completion of the Test Cell Construction program (e.g., within seven days). The report should provide the missing information that documents development of the "*critical parameters to be used during construction at this site, including mix design, injection hole spacing, injection pressure, panel length, extraction rates and wall thickness*" (see Response # 2).

It is also expected that the results of the Test Cell Construction program will allow Solutia to provide a better estimate of spoil volume and spoil composition (see Response # 7), recognizing that, as stated in Volume 1, Section 4.4 of the RD/RA Prefinal Design, *"the volume and type of spoils will depend on the contractor's selected means and methods"* and that "*the spoils could be any combination of clay, sand, gravel, and grout*".

Accordingly, we would not support Solutia's assumption (see Response # 2) that *"the EPA representative on site would approve the pre-production test procedures that yielded a satisfactory product"*. It is recommended instead that full-scale barrier wall construction approval be contingent on EPA review and approval of the Test Cell Construction Report. Thus it is important that the report contain sufficient technical detail to allow reviewers to fully understand the design and construction of the final barrier wall.

Finally, with regard to Response # 6, it would be helpful if Solutia could provide ahead of time the scope of the proposed Test Cell Construction program. For instance, will there be more than one test cell? And how much time will the Test Cell Construction program take?